

REMARKS

Claims 27-43 were rejected in an Office Action dated December 14, 2006. Claims 27-32 and 36-41 have been amended; claims 44-49 have been added. Entry of the new claims and amendments is requested. Support for the amendments may be found in the "Detailed Description of the Invention", for example, at pages 6-8, and in the Examples. No new matter is deemed added by the instant amendments. Applicants respectfully request reconsideration of the present application in view of the following remarks.

Rejections under 35 USC §103(a)

Claims 27-29 were rejected under 35 USC §103(a) as being unpatentable over Garbuio (US 3,925,916) substantially as set forth in the April 20, 2006 Office Action.

Applicant asserts that the amendment to the claims renders the rejection over Garbuio moot, where, among other things, Garbuio does not disclose the method steps recited therein for forming a mixture comprising at least one porous material selected from fumed metal oxide and aerogel; compressing the mixture to form a structure material; placing the structure material in a gas impermeable envelope; sealing and evacuating air from the envelope to form a flat structure; and shaping the flat insulating structure to form a shaped insulating structure. Removal of the rejection is therefore respectfully requested.

Claims 27-43 are rejected under 35 USC §103(a) as being unpatentable over Kuznetz (US 4,813,160) in view of Smith et al. (US 5,877,100). Applicant has claimed a method comprising, among other things, the steps of first forming a flat insulating structure and then, secondly, shaping the flat insulating structure into a shaped form. Prior to Applicant's invention it was not known to use flat evacuated forms of porous material in a gas impermeable envelope, having the low thermal conductivity for durable use in apparel, or to form such structures in a manner which renders them shapeable.

Neither document cited in the Action teaches the claimed method of forming a shaped insulating structure from a sealed and evacuated flat insulating structure of the presently claimed invention. Kuznetz teaches only making flat structures contained between an inner and outer sole, and does not teach a method of making a shaped structure having the claimed thermal conductivity properties.

Smith also does not teach or suggest the presently claimed invention. Smith teaches forming a shaped structure by placing particulate material in a porous pouch and pressing into a desired shape prior to placement in a gas impermeable membrane. There is simply no teaching of first forming a flat insulating structure which can advantageously be subsequently shaped into a second shaped form having the thermal conductivity properties claimed. Smith does not teach forming an insulating structure having more than one section of structure material within an envelope to provide flexibility to shape a flat vacuum panel into a shaped structure while maintaining the advantageous thermal conductivity as claimed by Applicant. Smith also does not teach vacuum panels can be made for durable use as required in apparel or for having the claimed thermal conductivity in forms less than 3mm. Smith does not teach shaping flat panels into a shaped insulating structure, such as a toe cap. Smith does not teach a sealing step for forming seals between sections of an insulating structure to provide flexibility for shaping. Thus, the claimed methods would not be obvious to one skilled in the art. Removal of the rejection is respectfully requested.

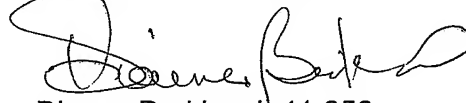
Double Patenting

Claims 27-29 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-34 of copending Application No. 11/106,788 in view of Garbuio (US 3,925,916) substantially as set forth in the April 20, 2006 Office Action. After all actions on the merits are resolved for the instant application, Applicant will consider filing a terminal disclaimer to overcome the obviousness rejection if it is deemed necessary.

Conclusion

For the foregoing reasons, the present invention as defined by the claims is neither taught nor suggested by any of the references of record. Accordingly, Applicant respectfully submits that these claims are now in form for allowance. If further questions remain, Applicant requests that the Examiner telephone Applicant's undersigned representative before issuing a further Office Action.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Dianne Burkhard", is written over the printed name.

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